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MANDEVILLA STANS (APOCYNACEAE) NEW TO THE USA FLORA

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ABSTRACT

Mandevilla stans (Apocynaceae) is documented as occurring in the USA, in the Santa Rita Mountains of southeastern Arizona. This represents the first record of the genus and species north of Mexico. *Mandevilla stans* is widespread in northwestern Mexico and has previously been documented within 80 km of the International Border.

KEY WORDS: Apocynaceae, *Mandevilla*, Arizona, Sonora, Mexico, Santa Rita Mountains

Mandevilla stans (A. Gray) J.K. Williams is distributed in the Sierra Madre of Sonora, Chihuahua, Sinaloa, and north-central Durango (Williams 2004; SEINET 2013, as *M. foliosa*), where it occurs on rocky slopes in desert grassland and into chaparral and pine-oak forest. The species has previously been documented within 80 kilometers of the international border (SEINET 2013). This report documents its occurrence in the Santa Rita Mountains within the Coronado National Forest in southeastern Arizona, 160 kilometers from the closest known Mexican populations, the first record of the species in the USA.

Morales (1998) treated *Mandevilla foliosa* (Müll. Arg.) Hemsl. broadly to include a population system in central Mexico (Jalisco and Michoacan east to Veracruz; the type from near Mexico City) as well as the system from northwestern Mexico later segregated by Williams as *M. stans*. The two systems, however, are allopatric (see map in Williams 2004) and discontinuously distinct in vestiture, supporting their treatment as separate species. The Arizona population is consistent in morphology with those of northwestern Mexico.

Mandevilla stans was found growing on a steep, south-facing hillside in full sun (Fig. 1), with some plants also in partial shade. The site is located in the transition from upper desert grassland to pinyon-juniper woodland. The soil is rocky and some plants were observed growing in cracks among large boulders. Associated taxa include *Erythrina flabelliformis*, *Cercocarpus montanus*, *Echinocereus rigidissimus*, *Agave schottii*, and *Ipomoea cristulata*.

The site is located approximately one mile up the Agua Caliente Trail from its western terminus along FR 183 on the west side of the Santa Rita Mountains. This population was first observed by John Milsom in August 2011, but the significance was not recognized. The population has persisted and is now noted to consist of approximately 80 mature plants, each typically with multiple stems from a perennial crown. At the time of collection many plants were blooming (Figs. 2, 3, 4) and some plants were at the beginning of seed maturation (Fig. 5). Additionally, some plants retained follicles and seed from the previous year (Fig. 6). Because seeds are produced, and because

plants are found in cracks among boulders, they appear to be reproducing sexually, rather than clonally by such means as stolons or rhizomes.

The *Mandevilla* population is localized along a 50 meter section of the Agua Caliente Trail. Plants occur on both sides of the trail and all plants are within 10 meters of the trail. Scouting for additional plants in the vicinity revealed no additional plants beyond this area. The trail system in the Santa Rita Mountains is a popular hiking destination and the proximity to an established hiking trail suggests possible human-mediated introduction of the mandevilla. However, this trail is less frequently used especially in late summer when the plants are in bloom.

Voucher. **USA**. **Arizona**. Santa Cruz Co.: Coronado National Forest, Santa Rita Mountains, Agua Caliente Trail, along trail ca. 1 mile from trailhead on the W side of the mountains, 31° 41.818' N, 110° 54.166' W, steep, S-facing hillside that drains into Agua Caliente Canyon in pinyon-juniper woodland, 1705 m, 14 Sep 2013, *Milsom 1* with Chamberland (ARIZ).

Figure 1. Habitat of *Mandevilla stans* in the Santa Rita Mountains of southeastern Arizona. *Mandevilla stans* is visible in the lower foreground and *Erythrina flabelliformis*, *Agave schottii*, and *Ipomoea cristulata* are visible throughout the image. Photo by Michael Chamberland.

Mandevilla stans has distinctive bright yellow flowers and attractive glossy leaves. It could be considered to have ornamental value. However, it is not present in the horticultural trade in Arizona. Ethnobotanical values are not known.

Figure 2. Flowering plants of *Mandevilla stans* with *Ipomoea cristulata*, Santa Rita Mountains. Photo by Michael Chamberland.

Figure 3. Flowering plant of *Mandevilla stans*, Santa Rita Mountains. Photo by Michael Chamberland.

Figure 4. Corolla of *Mandevilla stans*, Santa Rita Mountains. Photo by Michael Chamberland.

Figure 5. Post-anthesis gynoecia of *Mandevilla stans*, Santa Rita Mountains. Photo by Michael Chamberland.

Figure 6. Follicle and seed of *Mandevilla stans,* Santa Rita Mountains. Photo by Michael Chamberland.

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